WHAT WE CLAIM IS:

1. An imaging system comprising a zoom lens comprising a plurality of lens groups wherein a spacing between individual lens groups is varied to vary a focal length and an aperture stop located in an optical path for limiting at least an axial light beam diameter, and an electronic image pickup device located on an image side of the zoom lens, characterized in that:

the aperture stop has a fixed shape, and

a filter for performing light quantity control by varying transmittance is located on an optical axis of a space located at a position different from that of a space in which the aperture stop is located.

2. The imaging system according to claim 1, wherein:

when $1.5\times10^3\times a/1\ mm<F$ where F is a full-aperture F-number at a telephoto end and a is a minimum pixel pitch in mm of the electronic image pickup device, a length of the aperture stop in a vertical or horizontal direction of an image pickup plane is longer than the length of the aperture stop in a diagonal direction of the image pickup plane, or when $1.5\times10^3\times a/1\ mm>F$, the length of the aperture stop in the vertical or horizontal direction of the image pickup plane is shorter than the length of the aperture stop in the diagonal direction of the image pickup plane.

3. The imaging system according to claim 1,

wherein the filter is located in a minimum air space among variable air spaces in the zoom lens or in a longest air space among constant air spaces in the zoom lens.

4. The imaging system according to claim 1, wherein the light quantity control filter comprises at least one transmitting surface wherein a transmittance of a central portion thereof is higher than that of a marginal portion thereof.

5. The imaging system according to claim 1, wherein the light quantity control filter is tiltable with respect to an optical axis.

6. The imaging system according to claim 1, wherein the aperture stop is located between lens groups between which there is an air spacing variable upon zooming or focusing, and the light quantity control filter is located at a position different from the air spacing.

7. The imaging system according to claim 1, wherein that the aperture stop is positioned such that a perpendicular going from the aperture stop down to the optical axis intersects the optical axis within a lens medium in the lens groups.

8. The imaging system according to claim 7, wherein the aperture stop is located in contact with any lens surface in the lens groups.

9. The imaging system according to claim 1, wherein the aperture stop is formed of an aperture plate having an aperture on an optical axis side.

10. The imaging system according to claim 1, wherein:

the zoom lens comprises at least a first lens group having negative refracting power and a second lens group having positive refracting power, located just after the first lens group, wherein a spacing between the first lens group having negative refracting power and the second lens group having positive refracting power becomes narrower at a telephoto end than at a wide-angle end of the zoom lens,

the aperture stop is located between a surface in the first lens group having negative refracting power, said surface being located nearest to an image side of the zoom lens, and an image side-surface in the second lens group having positive refracting power, and

the light quantity control filter is located on an image plane side with respect to the aperture stop.

11. The imaging system according to claim 10, wherein the first lens group having negative refracting power is located nearest to the object side of the zoom lens.

12. The imaging system according to claim 10, wherein the zoom lens comprises, in order from an object side thereof, the first lens group having negative refracting power and the second lens group having positive refracting power, and lens groups movable for zooming are defined by only two lens groups, i.e., the first lens group having negative refracting power and the second lens

group having positive refracting power.

13. The imaging system according to claim 10, wherein the plurality of lens groups consist of, in order from the object side thereof, only two lens groups, i.e., the first lens group having negative refracting power and the second lens group having positive refracting power.

14. The imaging system according to claim 10, wherein the aperture stop is located in an air space just before the second lens group having positive refracting power.

15. The imaging system according to claim 10, wherein the light quantity control filter is located in an air space just after the second lens group having positive refracting power.

16. The imaging system according to claim 1, which constantly satisfies condition (1):

$$0.01<\alpha/\beta<1.3 \qquad \ldots (1)$$

where α is an axial distance from the aperture stop to an entrance surface of the light quantity control filter located on an image side with respect thereto, and β is an axial distance from the entrance surface of the light quantity control filter to an image pickup plane of the electronic image pickup device.

17. The imaging system according to claim 1, which satisfies condition (2):

$$0.5<\phi\beta/\phi\alpha<1.5 \qquad \ldots (2)$$

where $\phi\alpha$ is a maximum diameter of an aperture in the aperture stop and $\phi\beta$ is a maximum effective diameter (diagonal length) of the light quantity control filter.

18. The imaging system according to claim 1, wherein the aperture stop is located in a variable space, both lens surfaces just before and just after the aperture stop are concave on image sides thereof, and the aperture stop has a funnel-form outside shape concave toward the image side off and off an optical axis.

19. The imaging system according to claim 1, wherein the light quantity control filter can be inserted in or de-inserted from an optical path.

20. The imaging system according to claim 19, wherein, upon retracting from an optical axis, the light quantity control filter fluctuates in such a direction that a filter surface comes close to the optical axis.

21. An imaging system comprising a zoom lens comprising a plurality of lens groups wherein a spacing between individual lens groups is varied to vary a focal length and an aperture stop located in an optical path for limiting at least an axial light beam diameter, and an electronic image pickup device located on an image side of the zoom lens, characterized in that:

the aperture stop has a fixed shape, and

a shutter is located on an optical axis of a space located at a position different from that of a space in which the aperture stop is located.

22. The imaging system according to claim 21, wherein the aperture stop is located between lens groups between which there is an air space variable upon zooming or focusing, and the shutter is located at a position different from the air space.

23. The imaging system according to claim 21, wherein the aperture stop is positioned such that a perpendicular going from the aperture stop down to the optical axis intersects the optical axis within a lens medium in the lens groups.

24. The imaging system according to claim 23, wherein the aperture stop is located in contact with any one of lens surfaces in the lens groups.

25. The imaging system according to claim 21, wherein the aperture stop is formed of an aperture plate having an aperture on an optical axis side.

26. The imaging system according to claim 21, wherein:

the zoom lens comprises at least a first lens group having negative refracting power and a second lens group having positive refracting power, located just after the first lens group, wherein a spacing between the first lens group having negative refracting power and the second lens group having positive refracting power becomes narrower at a telephoto end than at a wide-angle end of the zoom lens,

the aperture stop is located between a surface in the first lens group having negative refracting power,

said surface being located nearest to an image side of the zoom lens, and the image side-surface in the second lens group having positive refracting power, and

the shutter is located on the image plane side with respect to the aperture stop.

27. The imaging system according to claim 26, wherein the first lens group having negative refracting power is located nearest to the object side of the zoom lens.

28. The imaging system according to claim 26, wherein the zoom lens comprises, in order from an object side thereof, the first lens group having negative refracting power and the second lens group having positive refracting power, wherein lens groups movable for zooming are defined by only two lens groups, i.e., the first lens group having negative refracting power and the second lens group having positive refracting power.

29. The imaging system according to 26, wherein the plurality of lens groups consists of, in order from its object side, only two lens groups, i.e., the first lens group having negative refracting power and the second lens group having positive refracting power.

30. The imaging system according to claim 26, wherein the aperture stop is located in an air space just before the lens group having positive refracting power.

31. The imaging system according to claim 26, wherein the shutter is located in an air space just after

the second lens group having positive refracting power.

32. The imaging system according to claim 21, which constantly satisfies condition (3):

$$0.01<\alpha'/\beta'<1.3 \quad \ldots (3)$$

where α' is an axial distance from the aperture stop to the shutter located on an image side with respect thereto, and β' is an axial distance from the shutter to the image pickup plane of the electronic image pickup device.

33. The imaging system according to claim 21, which satisfies condition (4):

$$0.5<\phi\beta'/\phi\alpha'<1.5 \quad \ldots (4)$$

where $\phi\alpha'$ is a maximum diameter of the aperture in the aperture stop and $\phi\beta'$ is a maximum effective diameter (diagonal length) of the shutter.

34. The imaging system according to claim 21, wherein the aperture stop is located in a variable space, both lens surfaces just before and just after the aperture stop are concave on image sides thereof, and the aperture stop has a funnel-form outside shape concave toward the image side.